

## PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: David L. Feigenbaum  
Fish & Richardson P.C.  
P.O. Box 1022  
Minneapolis, Minnesota 44330

**PCT**

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference <b>12144-015WO1</b>		Date of mailing (day/month/year) <b>29 JAN 2008</b>
International application No. <b>PCT/US 06/25018</b>		International filing date (day/month/year) <b>26 June 2006 (26.06.2006)</b>
Applicant <b>Airvana, Inc.</b>		

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35

**For more detailed instructions,** see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.
3. ☐ **With regard to the protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
- ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
- ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer:  <b>Lee W. Young</b>  PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774
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# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

To: David L. Feigenbaum  
Fish & Richardson P.C.  
P.O. Box 1022  
Minneapolis, Minnesota 44330

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT AND  
THE WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing  
(day/month/year) **29 JAN 2008**

Applicant's or agent's file reference  
**12144-015WO1**

**FOR FURTHER ACTION** See paragraphs 1 and 4 below

International application No.  
**PCT/US 06/25018**

International filing date  
(day/month/year) **26 June 2006 (26.06.2006)**

Applicant  
**Airvana, Inc.**

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**Filing of amendments and statement under Article 19:**

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

**When?** The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

**Where?** Directly to the International Bureau of WIPO, 34 chemin des Colombettes  
1211 Geneva 20, Switzerland, Facsimile No.: +41 22 740 14 35

**For more detailed instructions,** see the notes on the accompanying sheet.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

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The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, Volume II, National Chapters and the WIPO Internet site.

Name and mailing address of the ISA/US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450  
Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300  
PCT OSP: 571-272-7774

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 12144-015WO1	<b>FOR FURTHER ACTION</b>	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. <b>PCT/US 06/25018</b>	International filing date ( <i>day/month/year</i> ) 26 June 2006 (26.06.2006)	(Earliest) Priority Date ( <i>day/month/year</i> ) 24 June 2005 (24.06.2005)
Applicant Airvana, Inc.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- ☒ the international application in the language in which it was filed.  
☐ a translation of the international application into \_\_\_\_\_ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

- ☒ the text is approved as submitted by the applicant.  
☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- ☒ the text is approved as submitted by the applicant.  
☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

- a. the figure of the **drawings** to be published with the abstract is Figure No. 1  
☒ as suggested by the applicant.  
☐ as selected by this Authority, because the applicant failed to suggest a figure.  
☐ as selected by this Authority, because this figure better characterizes the invention.
- b. ☐ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/25018

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(8): G06F 15/16 (2007.01)

USPC: 709/227

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8): G06F 15/16 (2007.01); USPC: 709/227

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC: 709/224, 227, 203; 370/338; 455/436; 711/118 (keyword limited -- see keywords below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PubWEST(PGPB,USPT,EPAB,JPAB), SCHOLAR GOOGLE: mobile, drop, reestablish, session, wireless, maintain, open close, restoring, queue, degradation, breach

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2004/0038700 A1 (GIBBS) 26 February 2004 (26.02.2004), entire document; Abstract; para [0046]-[0051]; Fig 4-5; para [0034]; para [0048]; para [0051]; [0054]; para [0047]; para [0053].	23-24 ----- 1-22, 25-59
Y	US 2004/0008649 A1 (WYBENGA et al.) 15 January 2004 (15.01.2004), entire document; Abstract; para [0021]; para [0022]; para [0019]; para [0030]; para [0027]; para [0066]; para [0061]; para [0049]-[0051].	1-22, 25-41, 51-59
Y	US 6,542,481 B2 (FOORE et al.) 01 April 2003 (01.04.2003), entire document; Abstract; col 6, ln 49-51; col 7, ln 66-col 8, ln 45; Fig 4; col 3, ln 49-51; col 8, ln 1-17; col 8, ln 57-col 9, ln 3; col 9, ln 4-18; col 8, ln 13-16.	11-13, 15-16, 33-34, 42-50, 56-59
Y	US 2003/0031201 A1 (CHOI) 13 February 2003 (13.02.2003), entire document; Abstract; para [0019]-[0020], [0023], [0027]; para [0030].	8, 29, 43, 55

☐ Further documents are listed in the continuation of Box C. ☐

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

06 August 2007 (06.08.2007)

Date of mailing of the international search report

29 JAN 2008

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US, Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450  
Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300  
PCT OSP: 571-272-7774

# PATENT COOPERATION TREATY

From the 237  
INTERNATIONAL SEARCHING AUTHORITY

To: David L. Feigenbaum  
Fish & Richardson P.C.  
P.O. Box 1022  
Minneapolis, Minnesota 44330

## PCT

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing  
(day/month/year) **29 JAN 2008**

Applicant's or agent's file reference  
**12144-015WO1**

**FOR FURTHER ACTION**

See paragraph 2 below

International application No.  
**PCT/US 06/25018**

International filing date (day/month/year)  
**26 June 2006 (26.06.2006)**

Priority date (day/month/year)  
**24 June 2005 (24.06.2005)**

International Patent Classification (IPC) or both national classification and IPC  
**IPC(8) - G06F 15/16 (2007.01)**  
**USPC - 709/227**

Applicant **Airvana, Inc.**

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/US  
Mail Stop PCT, Attn: ISA/US  
Commissioner for Patents  
P.O. Box 1450, Alexandria, Virginia 22313-1450  
Facsimile No. **571-273-3201**

Date of completion of this opinion  
**06 August 2007 (06.08.2007)**

Authorized officer:  
**Lee W. Young**

PCT Helpdesk: 571-272-4300  
PCT OSP: 571-272-7774

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/US 06/25018

## Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
  - ☒ the international application in the language in which it was filed.
  - ☐ a translation of the international application into \_\_\_\_\_ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of:
  - a. type of material
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material
    - ☐ on paper
    - ☐ in electronic form
  - c. time of filing/furnishing
    - ☐ contained in the international application as filed
    - ☐ filed together with the international application in electronic form
    - ☐ furnished subsequently to this Authority for the purposes of search
4. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 06/25018

**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

Novelty (N)	Claims	1-22, 25-59	YES
	Claims	23-24	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-59	NO
Industrial applicability (IA)	Claims	1-59	YES
	Claims	None	NO

**2. Citations and explanations:**

Claims 23-24 lack novelty under PCT Article 33(2) as being anticipated by US 2004/0038700 A1 (Gibbs).

Claim 23 is anticipated by Gibbs, because Gibbs teaches a method comprising reestablishing a breached session in response to receiving a close session message (para [0046]-[0051]; Fig 4-5, item 508, 512).

Regarding claim 24, Gibbs teaches that reestablishing the breached session further comprises: closing the breached session; and sending a request to open a new session (para [0046]-[0051]; Fig 4-5, item 508, 512).

Claims 42 and 44-50 lack an inventive step under PCT Article 33(3) as being obvious over Gibbs in view of US 6542,481 B2 to Foore et al. (hereinafter 'Foore').

Regarding claim 42, Gibbs teaches a method for reestablishing breached sessions in a wireless communications network (para [0046]-[0051]; Fig 4-5, item 508, 512), the method comprising: receiving a request to transmit data to an access terminal associated with a breached session (para [0046]-[0051]). Gibbs does not specifically mention placing a first or second session in a queue. Foore teaches placing a first session in a queue for reestablishment of the first session; placing a second session in the queue for reestablishment of the second session, wherein the second session is prioritized below the first session in the queue; and promoting the second session above the first session in the queue in response to receiving a request to transmit data to an access terminal associated with the second session (col 6, ln 49-51; col 7, ln 66-col 8, ln 45; Fig 4). It would have been obvious for one of skill in the art to combine the teachings of Gibbs and Foore, because it would have provided a scheme for determining an efficient allocation of N fixed rate data channels amongst M users, as taught by Foore (col 3, ln 49-51).

Regarding claim 44, Foore teaches triggering a reestablishment of the second session (col 8, ln 1-17).

Regarding claim 45, Gibbs teaches that triggering a reestablishment comprises generating and transmitting a close session message to the access terminal associated with the second session (para [0051]; Fig 5, item 508).

Regarding claim 46, Foore teaches reestablishing the second session between a wireless network device and the access terminal (col 8, ln 1-17).

Regarding claim 47, Foore teaches that reestablishment is triggered based on a load state of a second wireless network device (col 8, ln 57-col 9, ln 3).

Regarding claim 48, Foore teaches triggering reestablishment of the first session after triggering reestablishment of the second session (col 8, ln 1-17).

Regarding claim 49, Foore teaches triggering reestablishment of the first session after triggering reestablishment of the second session (col 8, ln 1-17). Gibbs teaches receiving a request to transmit data to an access terminal associated with the first session (para [0046]-[0051]). The combination of Foore and Gibbs teaches to one of skill in the art triggering reestablishment of the first session after triggering reestablishment of the second session only after receiving a request to transmit data to an access terminal associated with the first session.

Regarding claim 50, Foore teaches monitoring the time that the first session has spent in the queue; and deleting the first session if it has occupied an entry in the queue past a predetermined time period (col 9, ln 4-18; col 8, ln 13-16).

(see continuation in supplemental box)

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 06/25018

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Claims 1-7, 9-10, 14, 17-22, 25-28, 30-32, 35-41 and 51-54 lack an inventive step under PCT Article 33(3) as being obvious over Gibbs in view of US 2004/0008649 A1 to Wybenga et al. (hereinafter 'Wybenga').

Regarding claim 1, Wybenga teaches saving at least a portion of session information associated with a first session between an access terminal and a first wireless network device (para [0021]); and triggering a reestablishment of the first session using the portion of the session information (para [0022]). Wybenga does not specifically teach triggering a reestablishment of the first session in response to detecting an unexpected degradation of the first session. However, Gibbs teaches triggering a reestablishment of the first session in response to detecting an unexpected degradation of the first session (para [0046]-[0051]). It would have been obvious for one of skill in the art to combine the teachings of Wybenga and Gibbs, because both references are directed toward the specific problem of preserving and reestablishing sessions in a wireless network (Gibbs, Abstract) (Wybenga, para [0019], [0021], [0022]).

Regarding claim 25, Wybenga teaches a radio network controller comprising: a first radio node server module configured to establish a session with a first access terminal (para [0021]); a storage device configured to store at least a portion of the session information that is sufficient to reestablish the session (para [0021], [0022]); and a control mechanism configured to cause a second radio node server module device to reestablish the session with the access terminal (para [0022]). Wybenga does not specifically teach reestablishing the session after detecting a degradation of the session between the first radio node server module and the access terminal (para [0046]-[0051]). It would have been obvious for one of skill in the art to combine the teachings of Wybenga and Gibbs, because both references are directed toward the specific problem of preserving and reestablishing sessions in a wireless network (Gibbs, Abstract) (Wybenga, para [0019], [0021], [0022]).

Regarding claim 51, Wybenga teaches a computer readable medium having instructions stored thereon (para [0030]), that, when executed by a processor, cause the processor to: save information associated with a first session with a wireless access terminal on a wireless network (para [0021]); and trigger a reestablishment of the first session using the saved information (para [0022]). Wybenga does not specifically teach triggering a reestablishment of the first session in response to detecting an unexpected degradation of the first session. However, Gibbs teaches a computer readable medium having instructions stored thereon (para [0034]), that, when executed by a processor, cause the processor to trigger a reestablishment of the first session in response to detecting an unexpected degradation of the first session (para [0046]-[0051]). It would have been obvious for one of skill in the art to combine the teachings of Wybenga and Gibbs, because both references are directed toward the specific problem of preserving and reestablishing sessions in a wireless network (Gibbs, Abstract) (Wybenga, para [0019], [0021], [0022]).

Regarding claims 2, 26 and 31, Wybenga teaches that degradation comprises cessation; and that the degradation comprises termination (para [0022]).

Regarding claim 3, Gibbs teaches transmitting to the access terminal a close session message (para [0051]; Fig 5, item 508).

Regarding claims 4 and 54, Wybenga teaches replicating the first session without closing the first session (para [0022]).

Regarding claim 5, Wybenga teaches degradation of the first session comprises detecting a state of the first wireless device (para [0027]).

Regarding claim 6, Gibbs teaches that the state comprises failure (para [0048]).

Regarding claim 7 and 53, Gibbs teaches restoring the first session upon receiving a request to open a new session from the access terminal (para [0054]).

Regarding claims 9 and 30, Gibbs teaches that transmitting a close session message occurs immediately upon detection of an unexpected degradation of the first session; and that the second radio node server module transmits a close session message immediately after the control mechanism detects a degradation of the session between the first radio node server module and the access terminal (para [0051]; Fig 5, item 508).

Regarding claims 10 and 32, Gibbs teaches that transmitting a close session message occurs after receiving a request to transmit data to the access terminal; and that the second radio node server module transmits a close session message only after the control mechanism receives a request to transmit data to the access terminal. (para [0051], [0054]).

Regarding claim 14, Wybenga teaches that the access terminal comprises at least one of: a cellular telephone, a personal data assistant, or a laptop computer (para [0002]).

Regarding claim 17, Gibbs teaches establishing the first session between the access terminal and a first wireless network device (para [0047]).

Regarding claim 18, Wybenga teaches that wherein the session information is saved on a second wireless network device (para [0021]).

Regarding claims 19 and 20, Wybenga teaches that the close session message is generated and transmitted by the second wireless network device (para [0066]).

Regarding claim 21, Wybenga teaches establishing a second session between the access terminal and the second wireless network device; and saving at least a portion of the second session information to a third wireless network device, wherein the portion of the second session information is sufficient to reestablish the second session between the access terminal and the third wireless network device (para [0021]).

(see continuation in second supplemental box)



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 06/25018

**Supplemental Box**

In case the space in any of the preceding boxes is not sufficient.

Continuation of:

Box V(2) -- Citations and Explanations (from first supplemental box)

Regarding claim 22, Gibbs teaches that the portion of the second session information is sufficient to generate a close session message for the access terminal for the second session (para [0051]; Fig 5, item 508).

Regarding claim 27, Wybenga teaches that the session information is sufficient to generate a close session message and the control mechanism is further configured to transmit the close session message to the access terminal (para [0066]).

Regarding claim 28, Wybenga teaches that the control mechanism is further configured to retrieve the portion of the session information from the storage device and send the portion to the second radio node server module without causing the session to be closed (para [0061]).

Regarding claim 35, Wybenga teaches that the first radio node server module comprises a first processing card and the second radio node server module comprises a second processing card (para [0049]).

Regarding claim 36, Gibbs teaches that the storage device comprises at least one of a non-volatile random access memory, a flash memory, and a disk memory (para [0034]).

Regarding claim 37, Wybenga teaches that the control mechanism is implemented on a processor, the processor connecting to the first radio node server module and the second radio node server module through a high speed bus (para [0049]-[0051]).

Regarding claims 38-41, Gibbs teaches that the control mechanism is implemented on the second radio node server module; and that the control mechanism is implemented on a third radio node server module (para [0034]).

Regarding claim 52, Gibbs teaches that triggering a reestablishment comprises transmitting a close session message to the access terminal, the close session message instructing the access terminal to open a new session (para [0053]).

Claims 11-13, 15-16, 33-34 and 56-59 lack an inventive step under PCT Article 33(3) as being obvious over Gibbs in view of Wybenga and further in view of Foore.

Regarding claims 11 and 56, the combination of Gibbs and Wybenga does not specifically disclose that the reestablishment of the first session is triggered based on a load state of a second wireless network device; or that the reestablishment of the first session is triggered based on a load. However, Foore teaches that the reestablishment of the first session is triggered based on a load state of a second wireless network device (col 8, ln 57-col 9, ln 3). It would have been obvious for one of skill in the art to modify the combination of Gibbs and Wybenga with the teaching of Foore, because it would have provided a scheme for determining an efficient allocation of N fixed rate data channels amongst M users, as taught by Foore (col 3, ln 49-51).

Regarding claim 12, 33 and 57, the combination of Gibbs and Wybenga does not specifically disclose placing degraded sessions in a queue. However, Foore teaches placing sessions in a queue for transmitting a close session message; and moving a queued session up in the queue in response to receiving a request to transmit data to an access terminal associated with the session; and a queue for transmitting a close session message wherein sessions are placed, the queue moving a closed session to a higher entry in response to receiving a request to transmit data to an access terminal associated with at least one of the sessions; and causing the processor to prioritize closed network sessions in a wireless communications network, the processor being caused to: place a first session in a queue for reestablishment of the first session; place a second session in the queue for reestablishment of the second session, wherein the second session is prioritized below the first session in the queue; and promote the second session above the first session in the queue in response to receiving a request to transmit data to an access terminal associated with the second session (col 6, ln 49-51; col 7, ln 66-col 8, ln 45; Fig 4). It would have been obvious for one of skill in the art to modify the combination of Gibbs and Wybenga with the teaching of Foore, because it would have provided a scheme for determining an efficient allocation of N fixed rate data channels amongst M users, as taught by Foore (col 3, ln 49-51).

Regarding claims 13 and 34, Wybenga teaches that the degraded sessions comprise breached sessions (para [0019]).

Regarding claims 15 and 16, Foore teaches deleting the session information for the session assigned to the access terminal if the access terminal has failed to request to open a new session after a predetermined time has elapsed after transmitting the close session message to the access terminal; and deleting the session information for the session assigned to the access terminal if a second wireless network device fails to reestablish the first session with the access terminal after a predetermined time has elapsed after sending the portion of the session information (col 9, ln 4-18; col 8, ln 13-16).

Regarding claim 58, Foore teaches triggering reestablishment of the first session after triggering reestablishment of the second session (col 8, ln 1-17).

Regarding claim 59, Foore teaches triggering reestablishment of the first session after triggering reestablishment of the second session (col 8, ln 1-17). Gibbs teaches receiving a request to transmit data to an access terminal associated with the first session (para [0046]-[0051]). The combination of Foore and Gibbs teaches to one of skill in the art triggering reestablishment of the first session after triggering reestablishment of the second session only after receiving a request to transmit data to an access terminal associated with the first session.

(see continuation in third supplemental box)

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/US 06/25018

**Supplemental Box**

**In case the space in any of the preceding boxes is not sufficient.**

Continuation of:

Box V(2) -- Citations and Explanations (from second supplemental box)

Claim 43 lacks an inventive step under PCT Article 33(3) as being obvious over Gibbs in view of Foore and further in view of US 2003/0031201 A1 (Choi).

Regarding claim 43, the combination of Gibbs and Foore does not specifically teach that the wireless communications network uses a 1.times. Evolution-Data Optimized protocol. However, Choi teaches that the wireless communications network uses a 1.times. Evolution-Data Optimized protocol (para [0019]-[0020], [0023], [0027]). It would have been obvious for one of skill in the art to modify the combination of Gibbs and Foore with the teaching of Choi, because it would have provided a method for collecting and allocating a radio resource to a mobile station, as taught by Choi (para [0030]).

Claim 8, 29, and 55 lack an inventive step under PCT Article 33(3) as being obvious over Gibbs in view of Wybenga further in view of Foore and further in view of Choi.

Regarding claim 8, the combination of Gibbs, Wybenga and Foore does not specifically teach that the triggering complies with a 1.times. Evolution-Data Optimized protocol. However, Choi teaches triggering that complies with a 1.times. Evolution-Data Optimized protocol (para [0019]-[0020], [0023], [0027]). It would have been obvious for one of skill in the art to modify the combination of Gibbs, Wybenga and Foore with the teaching of Choi, because it would have provided a method for collecting and allocating a radio resource to a mobile station, as taught by Choi (para [0030]).

Regarding claim 29, the combination of Gibbs, Wybenga and Foore does not specifically teach that the control mechanism is configured to comply with a 1.times. Evolution-Data Optimized protocol. However, Choi teaches triggering that the control mechanism is configured to comply with a 1.times. Evolution-Data Optimized protocol (para [0019]-[0020], [0023], [0027]). It would have been obvious for one of skill in the art to modify the combination of Gibbs, Wybenga and Foore with the teaching of Choi, because it would have provided a method for collecting and allocating a radio resource to a mobile station, as taught by Choi (para [0030]).

Regarding claim 55, the combination of Gibbs, Wybenga and Foore does not specifically teach that the wireless network uses the 1.times. Evolution-Data Optimized protocol. However, Choi teaches triggering that the wireless network uses the 1.times. Evolution-Data Optimized protocol (para [0019]-[0020], [0023], [0027]). It would have been obvious for one of skill in the art to modify the combination of Gibbs, Wybenga and Foore with the teaching of Choi, because it would have provided a method for collecting and allocating a radio resource to a mobile station, as taught by Choi (para [0030]).

Claims 1-59 have industrial applicability as defined by PCT Article 33(4), because the subject matter can be made or used in industry.

## NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*, a publication of WIPO.

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

### INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19 except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*, Volume I/A, Annexes B1 and B2).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, Volume I/A, paragraph 296).

#### What parts of the international application may be amended ?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

**When ?** Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

#### Where not to file the amendments ?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

**How ?** Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet must be submitted for each sheet of the claims which, on account of an amendment or amendments, differs from the sheet originally filed.

All the claims appearing on a replacement sheet must be numbered in Arabic numerals. Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively (Section 205(b)).

**The amendments must be made in the language in which the international application is to be published.**

#### What documents must/may accompany the amendments ?

##### Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

**The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.**